



113274

**U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION REPORT**

I. HEADING

DATE: February 4, 2009
SUBJECT: Cornell-Dubilier Electronics Site, South Plainfield, Middlesex County,
New Jersey
FROM: Dan Harkay, On-Scene Coordinator
TO: J. Rotola, ERRD-RAB
D. Karlen, 2ORC-NYCSFB
D. Mellott, 2ORC-NYCSFB
B. Grealish, ERRD-RAB
T. Grier, 5202G
P. Mennino, EPA-NYRB
R. Byrnes, 2OIG
S. Flanagan, 2ORC-NYCSFB
J. Mater, NJDEP
G. Zachos, ACSM/O
B. Doctors, ERRD-RAB
C. Kelley, RST 2

POLREP: Pollution Report No. 2 and Final (11/11/08 – 11/19/08)

II. BACKGROUND

OU-4

Site No.: GZ
CERCLIS No: NJD981557879
Response Authority: CERCLA
NPL Status: NPL, July 1998
Record of Decision: ROD for Operational Unit #1 ("OU-1") - issued on September 30, 2003. OU-1 addresses residential, commercial and properties in the vicinity of the Site. ROD for OU-2- issued in September 2004. OU-2 addresses soils with PCB concentrations above 500 ppm and contaminated soils that exceed New Jersey's Impact to Groundwater Soil Cleanup Criteria for contaminants other than PCBs.

Start Date: October 13, 2008
Completion Date: November 19, 2008

III. SITE INFORMATION

A. Incident Category

CERCLA Incident Category: Other - Interim Action to stabilize the banks of the Bound Brook along the eastern boundary of the Site and along the edge of the wetlands located in the southern portion of the Site.

B. Site Description

1. Site Location

The Cornell-Dubilier Electronics, Inc. ("CDE") Site is located at 333 Hamilton Boulevard, South Plainfield, Middlesex County, New Jersey. The former CDE facility consists of approximately 26 acres that formerly contained 18 buildings. The fenced 26-acre facility is bounded on the northeast by the Bound Brook and the former Lehigh Valley Railroad, Perth Amboy Branch (presently Conrail); on the southeast by the Bound Brook and a property used by the South Plainfield Department of Public Works; across Spicer Avenue on the southwest by single-family residential properties; across Hamilton Boulevard on the northwest by mixed residential and commercial properties; and to the south by a wetlands area. An estimated 540 persons reside within 0.25 miles of the former CDE facility, with the nearest residential homes located on Spicer Avenue and on the opposite side of Hamilton Boulevard, less than 200 feet from the former CDE facility. The total population estimated to live within one mile of the Site is 8,700 persons. A site map is included as Appendix 1.

Prior to 1936, Spicer Manufacturing Corp., a predecessor to Dana Corporation, owned and operated the facility. Spicer Manufacturing Corp. ceased operations in South Plainfield in 1929 and, beginning in 1936, leased the property to CDE. CDE operated at the facility from 1936 to 1962, manufacturing electronic components including capacitors. Polychlorinated biphenyls ("PCBs") and chlorinated organic solvents were used in the manufacturing process, and the company apparently disposed of PCB-contaminated materials and other hazardous substances directly on the facility soils. CDE's activities evidently led to widespread chemical contamination at the facility, as well as migration of contaminants to areas nearby the facility. PCBs have been detected in the groundwater, soils, building interiors at the industrial park, adjacent residential, commercial, and municipal properties, and in the surface water and sediments of the Bound Brook. High levels of volatile organic compounds (VOCs) have been found in the facility soils and in groundwater. Since CDE's departure from the facility in 1962, it has been operated as a rental property with over 100 commercial and industrial companies operating at the facility as tenants. Some of these tenants may have contributed to some Site contamination, but the PCB and VOC contamination appears to be primarily attributable to CDE's operation.

Capacitors, many containing PCBs, were dumped in large numbers at the Site, and capacitor debris has been found in the Bound Brook since the site was first identified. Recent erosion of a portion of the stream bank near the industrial park may have led to a spike in the amount of capacitor debris in the Brook.

Periodic inspections of the Bound Brook adjacent to the former CDE facility have identified an occasional capacitor. These capacitors are believed to have been displaced due to erosion. In December 2007, EPA collected additional sediment samples in the Bound Brook adjacent to the former CDE facility. Results indicate that PCB concentrations have increased in some areas of the Bound Brook. EPA's observations of occasional capacitors on the banks of the Brook and review of recent sediment analytical data warrant further action.

The removal action initiated on October 14, 2008 is an interim action that was designed to armor the banks of the Bound Brook in the area of the three culverts and along the wetlands that border the historical CDE disposal area. The objective is to eliminate direct contact with PCB-contaminated debris and prevent its migration from the banks along the perimeter of the former CDE facility property. The following actions were conducted to stabilize the banks and prevent the release of PCB-contaminated debris due to erosion:

- Vegetation was cleared from the banks of the Bound Brook in the area of the three culverts and on the southern bank of the facility property along the edge of the wetlands area. Over 20,000 ft² of area was cleared of vegetation.
- Geotextile fabric was installed over the soil in the cleared area to prevent erosion. The barrier was installed on the banks of the Bound Brook in Reach 1, near the railway siding and three culverts to approximately 140 feet downstream of the culverts in the tongue area and north bank, and for approximately 500 feet upstream of the culverts along the southern bank of the former CDE facility property that borders the wetlands area.
- Rip-rap was installed over the geotextile fabric to armor the banks of the Bound Brook and to secure the geotextile fabric ("revetment installation").

2. Description of Threat

PCBs are the most prevalent contaminants found at the Site. PCBs were initially released and disposed of as a result of manufacturing activities at the former CDE facility, and have migrated and spread further since CDE ceased operations. Surface and subsurface soil analysis indicated the presence of PCB compounds in almost all of the samples collected. Four individual Aroclors (-1242, -1248, -1254, and -1260) were detected at the former CDE facility.

PCBs consist of 209 different compounds which share a common chemical structure, but vary in the number of attached chlorine atoms. The International Agency for Research on Cancer and EPA classify PCBs as probable human carcinogens. The National Toxicology Program also concluded that PCBs are reasonably likely to cause cancer in humans, and the National Institute for Occupational Safety and Health determined that PCBs are potential occupational carcinogens. Studies of PCBs in humans have found increased rates of melanomas, liver cancer, gall bladder cancer, biliary tract cancer, gastrointestinal tract cancer, brain cancer, and a potential link between PCBs and breast cancer. PCBs are known to cause a variety of cancers in rats, mice, and other study animals.

Once PCBs enter a body, they tend to be absorbed into fat tissue and remain there. Unlike water-soluble chemicals, they are not excreted, so the body accumulates PCBs over time. Because of this, PCBs accumulate in the food chain; for example, a small fish may absorb PCBs in water or by eating plankton and these PCBs are stored in its body fat. When a larger fish eats the small fish, it also takes on any PCBs that have accumulated in the small fish, so larger fish and animals can build up a highly concentrated store of PCBs. Some types of PCBs may degrade into nontoxic forms while they are stored in the body, but this process can take many years.

People exposed directly to high levels of PCBs, either through skin absorption, by consumption, or inhalation have experienced irritation of the nose and lungs, skin irritations such as severe acne (chloracne) and rashes, and eye problems. Women exposed to PCBs before or during pregnancy can give birth to children with significant neurological and motor control problems, including lowered IQ levels and poor short-term memory.

As reported in the September 2004 EPA ROD for OU-2, test pit excavations unearthed capacitors that appeared corroded and/or partially burned. In addition, white and blue crystalline powder, electrical components, and other materials were unearthed during excavation of test pits.

Due to the presence of charred debris in the test pits and the fact that burning PCBs can result in the generation of highly toxic dioxins and dibenzofurans, a limited set of soil samples were analyzed for dioxins and furans; these contaminants were detected during the OU-2 RI/FS. Dioxins and furans are acutely and chronically toxic, and also carcinogenic. The potential health effects of these compounds include skin disorders such as chloracne, liver problems, and impairment of the immune, endocrine, reproductive, and nervous systems.

IV. RESPONSE INFORMATION

A. Situation

1. Current Situation

Following receipt of authorization for the performance of this time-critical removal action at the Cornell-Dubilier Electronics Site for the installation of revetment, ERRS personnel mobilized to Site on October 13, 2008.

2. Response Actions To Date

On September 26, 2008, Earth Tech, Inc. was forwarded the Task Order for the Cornell-Dubilier Stream/Wetlands Stabilization Activities and began procuring materials and equipment for the proposed work.

On October 10, 2008, a draft Health and Safety plan was completed by ERRS and reviewed by the EPA OSC. Equipment and materials were mobilized to the Site on October 13, 2008. An office trailer, portable bathrooms, geotextile material, and an excavator were delivered to the Site. ERRS personnel inspected and set up the Site equipment. The ERRS Response Manager met with an electrician to discuss requirements.

Stabilization of the banks of the Bound Brook bordering the wetlands began on October 14, 2008. The EPA OSC, ERRS, and RST 2 mobilized equipment from EPA's Edison, New Jersey facility. A wheeled loader and a photocopier were delivered to the Site. ERRS personnel initiated grubbing operations in the southwestern corner of Site adjacent to the Spicer Street perimeter fence. Approximately 5,000 ft² were cleared. RST 2 initiated particulate monitoring using DataRAM 4 particulate monitors. Particulate matter did not exceed established action levels.

10/15/08 – ERRS installed the rip-rap staging area. ERRS continued grubbing in the southwestern corner of Site adjacent to Spicer Street perimeter fence. Approximately 7,200 ft² have been cleared to date. ERRS installed geotextile material in the southwestern corner of the Site. Approximately 750 ft² of geotextile material were installed. Verizon connected telephone service to the office trailers. OSC obtained a replacement DataRAM from EPA's Edison, New Jersey facility. RST 2 carried out particulate monitoring using DataRAM 4 particulate monitors. Particulate matter did not exceed established action levels. RST 2 measured the total area cleared by ERRS and photographed Site activities. RST 2 generated a daily Site entry/exit log and particulate monitoring summary.

10/16/08 – Six loads of six-inch D50 rip-rap were delivered to the Site and staged. ERRS transferred the staged rip-rap to the prepared area in the southwestern corner of the Site. ERRS installed rip-rap over geotextile in the southwestern corner of the Site. Approximately 3,000 ft² of geotextile and rip-rap have been installed to date. An electrician connected power to the Site office trailers. RST 2 conducted particulate monitoring using DataRAM 4 particulate monitors. Particulate matter did not exceed established action levels, although readings were slightly elevated due to haze and high humidity. RST 2 photographed Site activities, and generated a daily Site entry/exit log and particulate monitoring summary.

10/17/08 – A diesel fuel tank and "rock box" were delivered to the Site. Eight (8) loads of six-inch D50 rip-rap were also delivered. ERRS continued installing geotextile material and rip-rap in the wetlands area. At the end of the day, a total of 6,480 ft² of armoring (clearing, geotextile placement and rip-rap coverage) was completed. To date, 360 tons of six-inch D-50 rip-rap have been delivered to the Site. RST 2 generated a daily particulate monitoring summary. Particulate matter did not exceed established action levels.

10/20/08 – ERRS continued grubbing along the stream bank area to the south of the twin culvert.

Approximately 150 linear feet of bank were cleared of trees/brush, and geotextile was placed over 50 feet of bank and covered with rip-rap. Additional geotextile was ordered. Six loads of rip-rap were delivered to Site. To date, approximately 512 tons of rip-rap have been delivered to the Site. RST generated a daily particulate monitoring summary. Particulate matter did not exceed established action levels.

10/21/08 – ERRS personnel continued clearing the stream bank and installing geotextile fabric and rip-rap. Approximately 180 linear feet of rip-rap have been installed and 10,440 ft² of revetment have been completed to date. Only three loads of rip-rap were delivered as the quarry ran out of material. To date, approximately 590 tons of rip-rap have been delivered to the Site.

10/22/08 – ERRS personnel cleared the twin culverts located downstream of debris. Seven loads of rip-rap were delivered to the Site. To date, 760 tons of rip-rap have been delivered to the Site.

10/23/08 – The clearing of the east and west sides of the culverts (upstream) was completed. Approximately 1,680 ft² of revetment installation were completed in the southern portion of the property (12,480 ft² total to date). Eight loads of rip-rap and five rolls of fabric were delivered to the Site. Approximately 837 tons of rip-rap have been delivered to the Site to date. Branches and debris that were removed from the downstream culvert were relocated.

10/24/08 – ERRS personnel installed 1,600 ft² of rip-rap on the west side of the stream (upstream). The edge of the rip-rap along the length of the revetment was graded. Approximately 1,600 ft² of revetment installation were completed (14,080 ft² total to date). Two loads of rip-rap were delivered to the Site. Approximately 888 tons of rip-rap have been delivered to the Site to date.

10/27/08 – The installation of the revetment on the west side of the stream (upstream) was completed. ERRS personnel began clearing the north side of the twin culverts. Three loads of rip-rap were delivered to the Site. Approximately 964 tons of rip-rap have been delivered to the Site to date.

10/28/08 – Heavy rain and strong winds stopped operations. The Foreman, Technician, and Equipment Operator were sent back to the hotel due to the inclement weather.

10/29/08 – The area to the west of the of the twin culverts (downstream) was cleared.

10/30/08 – The installation of fabric on the west side of the stream was completed. Approximately 2,000 ft² of revetment were completed. The track skid-steer loader arrived on Site. The total revetment installed to date is approximately 17,080 ft².

10/31/08 – Activities focused on wood chipping. Four loads of rip-rap were delivered to the Site. Approximately 1,066 tons of rip-rap have been delivered to the Site to date.

11/03/08 – The peninsula area in-stream was cleared. ERRS personnel began installing the fabric and rip-rap in the peninsula area. Approximately 750 ft² of revetment were completed. The total revetment installed to date is approximately 17,830 ft².

11/04/08 – A total of 3,000 ft² of revetment was installed. Six loads of rip-rap were delivered to the Site. Approximately 1,220 tons of rip-rap have been delivered to the Site to date. The total revetment installed to date is approximately 20,780 ft².

11/05/08 – The installation of revetment was completed (2,000 ft²). In addition, rip-rap was installed in areas up-gradient of the twin culverts where the stream had receded. Three loads of rip-rap were delivered. Posts and the top rail for fencing were also delivered. A total of 22,780 ft² of revetment has been installed to date.

11/06/08 – ERRS personnel filled in revetment areas with additional rip-rap and continued wood-chipping operations. The rock box was demobilized from the Site.

11/07/08 – ERRS personnel began the installation of the fence posts. Forty fence posts were installed in concrete. The rubber-tire loader was decontaminated and called off-rent.

11/10/08 – The installation of 52 fence posts was completed and wood-chipping operations continued. The rubber-tire loader was demobilized from the Site.

11/11/08 – Wood-chipping operations continued (90% complete).

11/12/08 – Wood-chipping operations were completed. PPE and silt fencing were loaded into a roll-off container. ERRS personnel began installing top-rails for fencing.

11/13/08 – ERRS personnel began installing fence fabric.

11/14/08 – The installation of fence fabric and passage gates was completed.

11/15/08 – ERRS personnel installed silt fence along existing fencing beginning at the twin culverts and extending approximately 300 feet towards the wetlands.

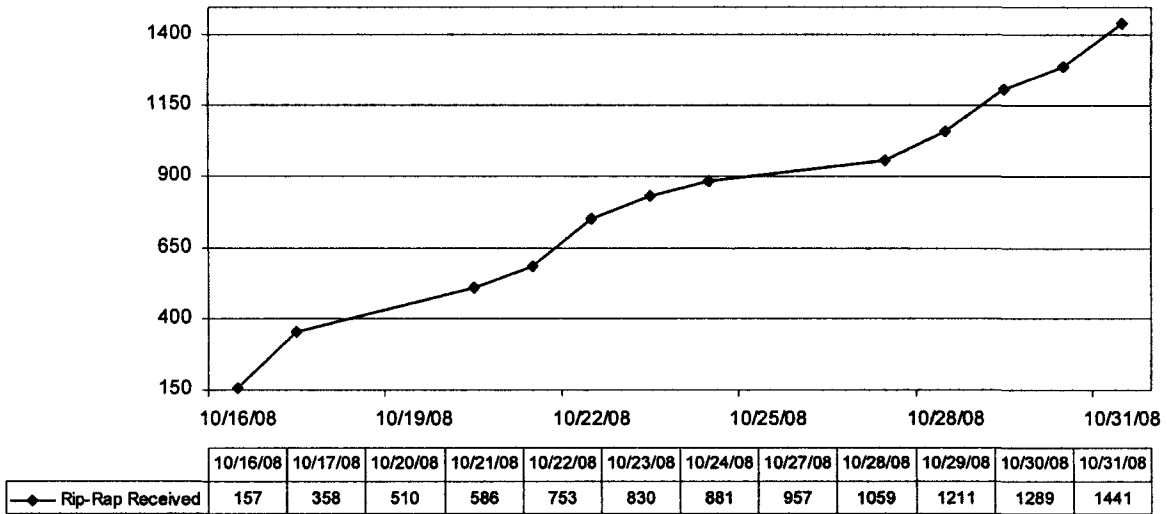
11/16/08 – ERRS personnel installed a three-foot wide border of rip-rap along the entire length of recently-installed fence.

11/17/08 – ERRS personnel completed the installation of rip-rap and graded wood chips on the temporary roadway adjacent to the wetlands area.

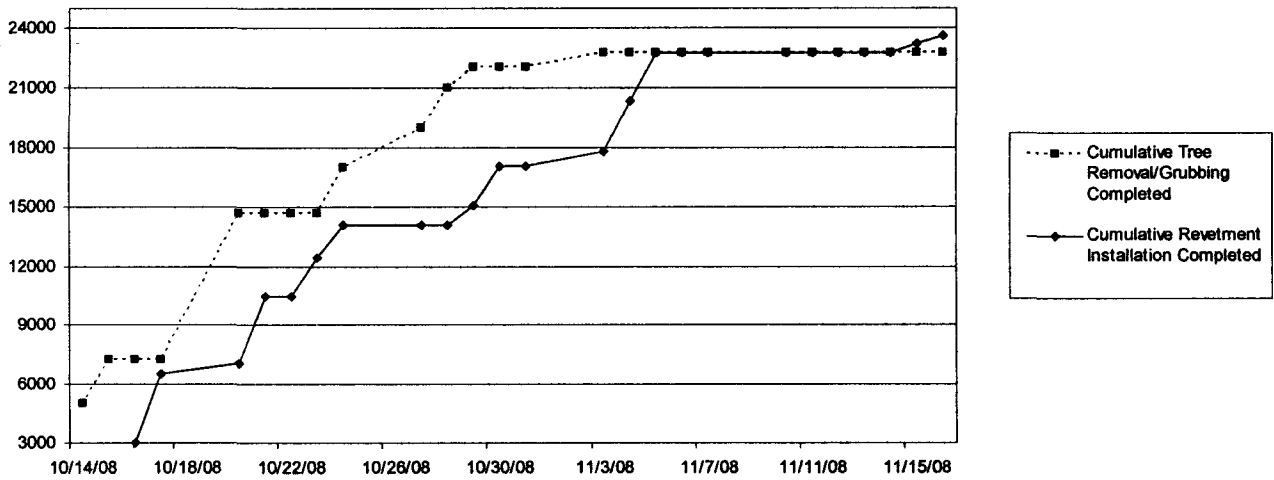
11/18/08 – ERRS personnel installed straw erosion matting adjacent to the silt-fenced area and applied grass seed to all disturbed areas.

11/19/08 – The scope of work in the Action Memorandum was completed and ERRS personnel demobilized from the Site.

**Cornell-Dubilier Electronics Site
South Plainfield, NJ
Revetment Installation Activities
Cumulative Rip-Rap Received (tons)**



**Cornell-Dubilier Electronics Site
South Plainfield, NJ
Revetment Installation Activities
Cumulative Revetment Installation (ft²)**



B. Planned Response Activities

None at this time.

C. Next Steps

A final report detailing the Removal Action will be completed and submitted by RST 2 to EPA. A public meeting is scheduled for February 2009.

D. Key Issues

None at this time.

V. COST INFORMATION

	Amount Budgeted	Cost to Date	Total Remaining
ERRS Contractor Costs	\$355,466	\$204,000	\$151,466 (43%)
RST 2 Costs	\$42,500	\$30,800	\$11,700 (28%)

The above accounting expenditures are an estimate based on figures known to the OSC at the time this report was written. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.